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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,113	06/04/2001	Jacky Joachim	203852U/SOPCT	6849
22850	7590	10/20/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			GRAY, JILL M	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 10/20/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/786,113	Applicant(s) JOACHIM ET AL.	
	Examiner Jill M. Gray	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-19 and 21-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-19 and 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The rejection of claim 21 under 35 U.S.C. 102(b) as being anticipated by Lindemann et al, 5,190,997 is moot in view of applicants' amendment.

The rejection of claims 1, 5-14, 22-27, and 32 under 35 U.S.C. 103(a) as being unpatentable over Lindemann et al, 5,190,997 is moot in view of applicants amendments.

The rejection of claims 2, 16-17, 29-31, and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Lindemann et al, 5,190,997 in view of PCT Publication WO 95/31411 is moot in view of applicants amendments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindemann et al, 5,190,997 (Lindemann) for reasons of record.

In claim 15, the language of "prepared by melting a glass or rock mineral composition, fiberizing the molten glass or mineral composition into filaments to form a mineral wool, applying a size comprising a thermosetting resin to the mineral wool which has just been formed, simultaneously or sequentially applying a hydrophilic latex to the mineral wool, then taking up the sized mineral wool in the form of a web, and then

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thermally curing the size” are process limitations in a product claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 Fed. Cir. 1985.

Accordingly, the subject matter defined by the invention of claim 15 is an insulation product having a hydrophilic latex essentially as defined, applied thereto.

Lindemann teaches an insulation product comprising a hydrophilic latex that is a dispersion or emulsion of homopolymer or copolymer prepared from one or more monomers having at least one hydrophilic functional group. See column 5, line 53- through column 5, line 25, and column 10, lines 54-61.

Therefore, the teachings of Lindemann anticipate the invention as claimed in present claims 15 and 19.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 5-15, 19, 22-27, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander 5,972,434 in view of Lindemann et al, 5,190,997 (Lindemann) and Meng et al, 5,872,067 (Meng).

Kajander teaches the formation of glass fiber insulation products (claims 15 and 19) comprising a method of making said insulation products wherein the glass fibers can be coated with an aqueous sizing containing a boron compound and a conventional film former, applying a binder to the nonwoven mat and curing. In addition, Kajander teaches that known processes for making glass fiber insulation products include the method steps of forming a melt, fiberization of said melt, flame attenuation, spraying with an aqueous solution of a binder, collecting the wetted fibers in the form of a blanket or nonwoven article and heating to cure the resin. See column 12, line 21 through column 13, and line 1. The binder material of Kajander can be a hydrophilic resin prepared from one or more monomers having at least one hydrophilic functional group selected from the group consisting of hydroxyl, carboxyl, and ester, such as urea formaldehyde resin, epoxy resin and acrylic resin, per claims 1 and 5-6. See column 5, line 58 through column 6 and line 3. Kajander is silent as to the specific film former in his size composition. Meng teaches glass fiber mats comprising glass fiber strands coated with a size composition. The size composition comprises one or more film formers that can be thermoplastic or thermosetting, further teaching that suitable film formers include acrylic polymers, vinyl polymers and phenolics, as required by claims 26 and 27. See column 6, line 60, through column 7, line 15 and lines 42-50.

The method steps of melting glass, fiberizing molten glass into filaments, applying a size to the newly formed glass fibers, applying a binder to said fibers, taking up the wetted fibers and curing (claims 1 and 14-15) is well known in the art as evidenced by the teachings of Kajander. Though Kajander is silent as to the specific film former in his size, the utility of thermoset resins as film formers in size compositions for glass fibers is also well known in the art, as evidenced by the teachings of Meng. That Kajander is silent as to the specific film former is of no moment because the skilled artisan would immediately envisage thermosetting resins. Moreover, the general level of knowledge and skill in the art at the time the invention was made would have rendered it obvious to choose a conventional film former as required by Kajander, such as a thermosetting resin or phenolic resin, motivated by the teachings of Meng that these resins are suitable in the formation of size compositions. As to the requirement of "improving the mechanical strength after ageing of an insulation product comprising mineral wool", the examiner has reason to believe that the resultant articles of Kajander have improved mechanical strength after ageing because the prior art teaches the same, conventional process steps as applicants, utilizing a similar size composition as required in claim 1. As to claims 6-13, 22-25, and 32, Lindemann teaches the formation of insulation products by applying an adhesive composition to a glass fiber mat and curing. The adhesive composition comprises a homopolymer or copolymer that can be a vinyl polymer or vinyl acetate homopolymer or copolymer, such as polyvinyl acetate or vinyl chloride/ethylene copolymer, as required by claims 5-6 and 8. See column 6, lines 21-25. Also, the latex can contain a protective colloid having hydrophilic functional

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groups such as cellulose or polyvinyl alcohol, as required by claims 7 and 32. See column 11, lines 41-44 and claim 6. The composition can contain a water-repellent agent such as silicone as contemplated by applicants in claims 9 and 22, and the thermosetting resin can be a phenolic resin, as required by claims 26 and 27. See column 10, line 63 and column 11, line 1. The composition has a Tg and solids content within applicants' range as set forth in claims 10-12 and 23-25. See column 11, lines 21-24 and column 24, lines 53-54. Regarding claim 13, Lindemann teaches mixing the hydrophilic latex and thermosetting resin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the binder of Kajander a binder as taught by Lindemann, with the reasonable expectation of success of obtaining insulation products having maximum dead air space per unit weight.

Accordingly, the combined teachings of Kajander, Lindemann and Meng would have rendered obvious the invention as claimed in present claims 1, 5-15, 18-19, 22-28, and 32.

Claims 2, 16-17, 29-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander 5,972,434 in view of Lindemann et al, 5,190,997 (Lindemann) and Meng et al, 5,872,067 (Meng), as applied above to claims 1, 5-15, 18-19, 22-28, and 32, further in view of PCT Publication WO 95/31411 (the publication).

Kajander, Lindemann and Meng are as applied above, but are silent as to their glass fibers being capable of dissolving in a physiological medium. The publication teaches biologically degradable mineral fibers that can be used for insulation purposes, per claims 2 and 16 and comprises at least one alkali metal oxide in the amounts set

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forth by applicants in claims 29-31. See pages 2-3. While silent as to the specific rate of dissolution as required by claims 17 and 33-34, it is noted that the fibers of the publication are the same type disclosed by applicants as being suitable. Accordingly, it is the position of the examiner that this property is inherent in the fibers of the publication. It would have been obvious to use as the fibers of Kajander mineral fibers as taught by the publication for the efficacious properties associated therewith, namely, biological degradability, temperature stability and good processability.

Therefore, the combined teachings of Kajander, Lindemann, Meng and the publication would have rendered obvious the invention as claimed in present claims 2, 16-17, 29-31, and 33-34.

Claims 18, 28, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander 5,972,434 in view of Lindemann et al, 5,190,997 (Lindemann) and Meng et al, 5,872,067 (Meng), as applied above to claims 1, 5-15, 18-19, 22-28, and 32, further in view of PCT Publication WO 98/40437 (the publication), cited to show the state of the art.

Kajander is as set forth above but does not teach the density of his insulation product. The publication is cited to show the general state of the art at the time the invention was made, namely, that it is known in the art that mineral wool densities varied generally between 5 and 200 kg/m³. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce an insulation product of the type set forth by applicants wherein the density of said product is within the range generally known in the art and as set forth by applicants in

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claims 18, 28, and 35. Moreover, this limitation is not construed to be a matter of invention in the absence of factual evidence to the contrary.

Therefore, the teachings of Kajander in combination with the general level of ordinary skill and knowledge in the art as evidenced by the publication would have rendered obvious the invention claimed in present claims 18, 28 and 35.

Response to Arguments

Applicant's arguments with respect to claims 1-2, 5-19, 21-34, have been considered but are moot in view of the new ground(s) of rejection.

Applicants' arguments with respect to the rejection of claims 15, 19 and 21 over Lindemann, 5,190,997 have been noted. In response thereto, the rejection over claim 21 is moot in view of applicants' amendments.

Applicants argue that Lindemann discloses a glass fiber mat with a binder, wherein a binder is different from a size, further arguing that a binder refers to a composition which is applied on the fibers once they are formed, as a post treatment step, whereas a size refers to a composition which is applied on the filaments during or immediately thereafter the formation of a mineral wool and that the specific property requirements for the size are different than a binder as the size requires sprayability, water-dilutability and thermal stability.

These arguments are not found to be persuasive since the subject matter defined by the invention, as set forth previously, embraces an insulation product having a hydrophilic latex applied thereto.

No claims are allowed.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jill M. Gray
Examiner
Art Unit 1774



N. EDWARDS
PRIMARY EXAMINER